



STATE OF THE SEWERS 2022

*Performance Metrics
December 2022*

Fiscal Year 2022 (July 1, 2021 through June 30, 2022)



Eric Adams
Mayor

Rohit T. Aggarwala
Commissioner

Green Playground
in Brooklyn

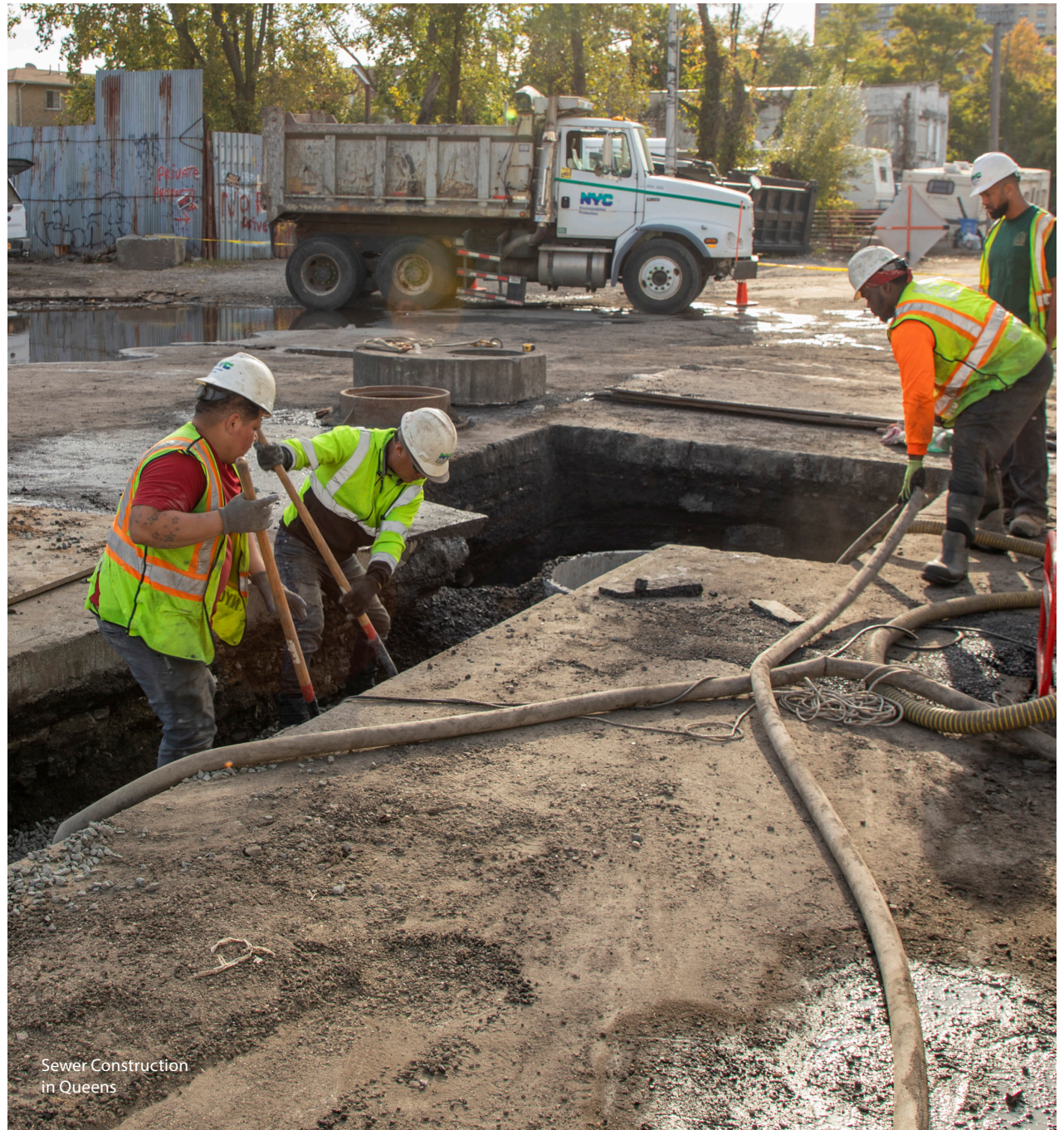
TABLE OF CONTENTS

INTRODUCTION	3
THE SEWER SYSTEM	4
TRASH IT. DON'T FLUSH IT.	5
PERFORMANCE METRICS	6
Citywide	7
Sewer Backup and Catch Basin Resolution Time	8
Bronx	9
Brooklyn	10
Manhattan	11
Queens	12
Staten Island	13

INTRODUCTION

The New York City Department of Environmental Protection (DEP) protects public health and the environment by supplying clean drinking water, collecting and treating wastewater, and reducing air, noise, and hazardous materials pollution. To achieve this mission, DEP operates and maintains 7,500 miles of sewers that convey an average of 1.3 billion gallons of wastewater per day to 14 in-city wastewater resource recovery facilities.

Over the last decade, DEP has embraced a data-driven, proactive approach to operating and maintaining the sewer system. By using a range of digital tools and innovative practices, DEP develops targeted programs to provide a high level of service to our customers while focusing on investments that will prioritize our resources.



Sewer Construction
in Queens

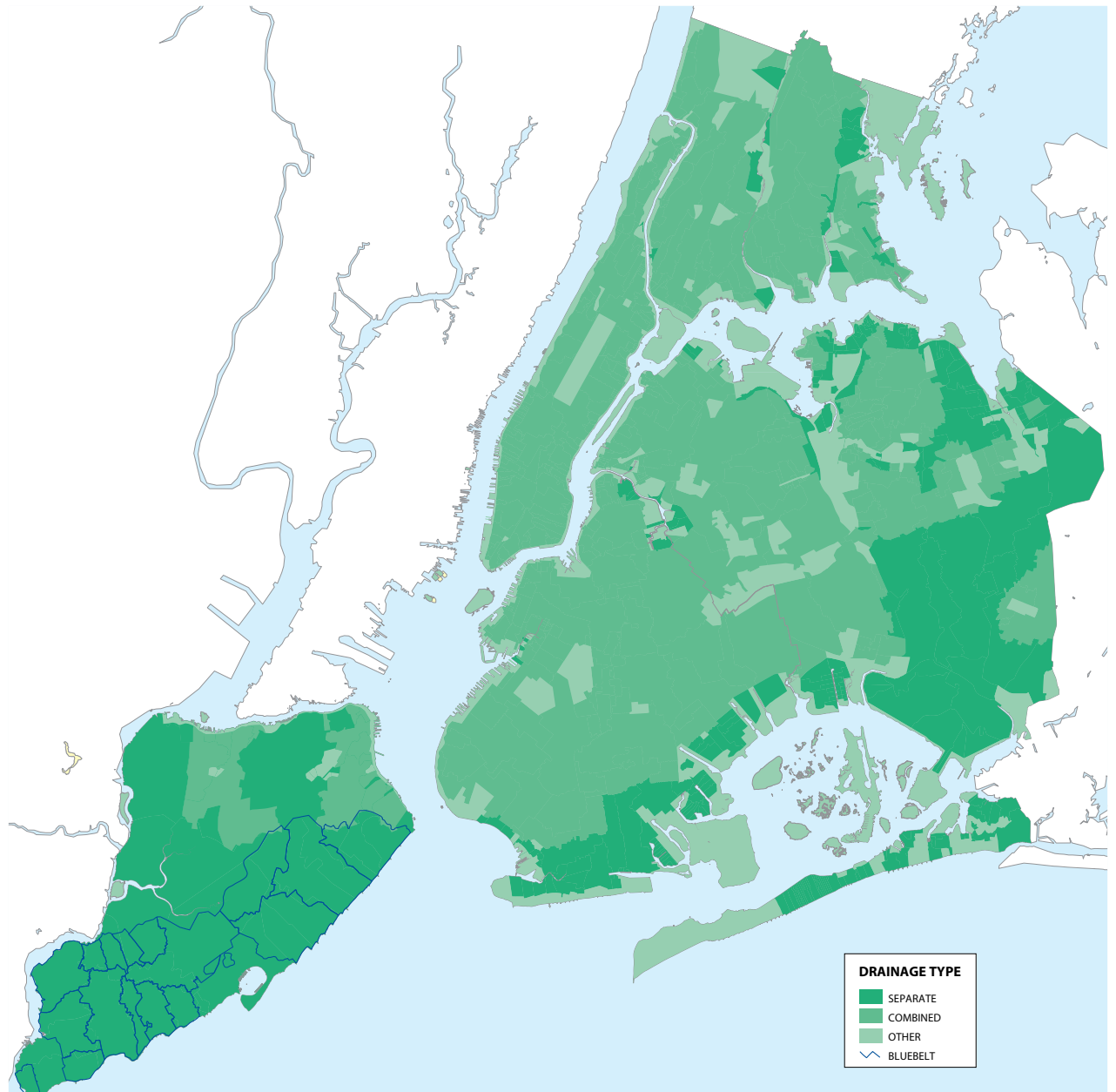
THE SEWER SYSTEM

Approximately 60% of New York City's sewer system is combined, handling sanitary waste from homes and businesses along with storm water. The other 40% of the sewer system is separated – sanitary sewers carry sewage to the treatment plant, while storm sewers carry storm water runoff in a separate pipe directly to a local waterway.

In wet weather, wastewater resource recovery facilities that receive combined flow can treat up to twice the designed dry weather flow. However, to prevent flooding, the capacity of the city's sewer system is greater than that of the plants. When the plants reach their capacity at twice designed dry weather flow, to protect against sewage backing up into homes and businesses, regulators release the excess flow from the sewers into the harbor as combined sewer overflow.

Sewers vary in size; however, all sewers are designed to convey wastewater through the system at a speed fast enough to minimize the deposition of debris and sediment in the pipes but slow enough to minimize scouring and erosion of the pipes. DEP targets its programs and resources to ensure the system continues to operate as designed and to maintain the system in a state of good repair.

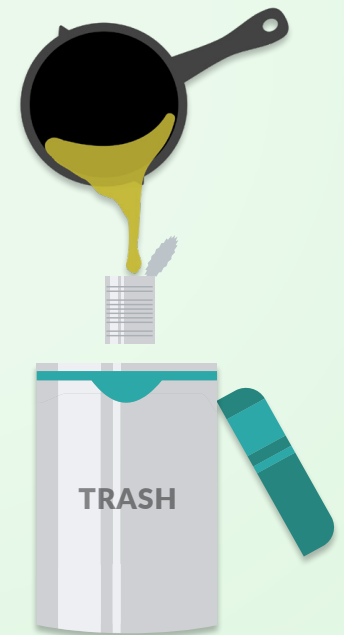
To learn more about how DEP's sewer system functions, [click here](#).



TRASH IT. DON'T FLUSH IT.

New York City needs the help of all its residents to keep our sewer system running properly, so DEP continues to promote our "Trash It. Don't Flush It." campaign to warn New Yorkers of the hazards of flushing grease, wipes, and other trash down the drain. The campaign has garnered more than 95 million impressions and more than 150,000 website visits. Door-to-door outreach efforts have reached more than 30,000 people and DEP also regularly conducts grease compliance inspections at food service establishments citywide. To learn more about this campaign and how to properly dispose of grease, wipes, and other trash, visit fatbergfree.nyc.

TRASH IT. DON'T FLUSH IT.



FATBERGS form when grease, wipes and other stuff get flushed, clogging pipes and draining wallets.

LEARN MORE: FatbergFree.nyc

#FatbergFreeNYC

NYC Environmental Protection

PERFORMANCE METRICS

DEP uses a variety of metrics to evaluate our operations across the agency, from the work of field crews and frontline supervisors to senior management. This data-driven approach allows us to focus our resources, develop targeted programs, and provide the highest level of service to our customers. All annual performance metrics in this report correspond to fiscal years. For example, Fiscal Year 2022 began July 1, 2021, and ended June 30, 2022.

Sewer Backup Complaints

When our field crews respond to a customer call about a potential sewer backup, they first open manholes around the area where the backup or blockage is reported. If the sewer segment has higher than expected wastewater levels, the crew will note this as a “confirmed sewer backup” regardless of whether any actual backup occurs. If a crew does not detect higher than expected wastewater levels, it notes an “unconfirmed sewer backup.”

Recurring Confirmed Backup Complaints

The sewer system is divided into 160,000 “sewer segments” each of which runs between two adjacent manholes. In order to identify systemic issues, DEP tracks street segments with recurring confirmed sewer back-ups (multiple backups on the same segment in the same year) during both dry and wet weather.

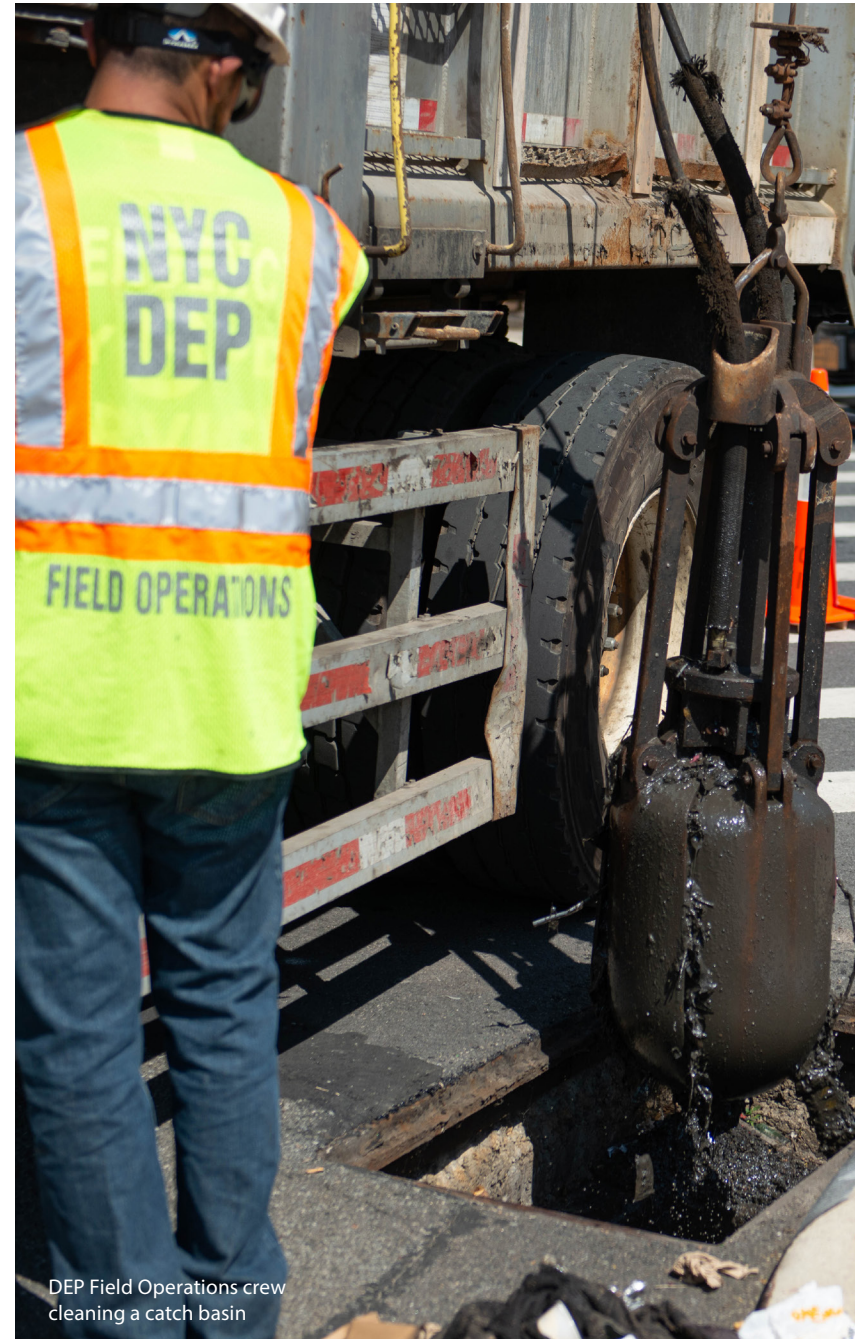
Sewer Cleaning

“Proactive” sewer cleaning includes miles of sewers cleaned as part of the DEP inspection and analysis programs, DEP’s regular sewer maintenance program, and the Department of Design and Construction’s inspection and cleaning program. Sewer cleaning activities in response to a 311 complaint are categorized as “Reactive” cleaning.

Confirmed Sewer Backup Causes

After visually inspecting affected sewer segments, crews identify and record the potential cause of a confirmed sewer backup.

- “Grease” refers to the buildup of fats, oils, and grease in a sewer.
- “Debris” refers to sand, silt, and roadbed aggregate that accumulate along the bottom of the sewer.
- “Heavy Rain” refers to microbursts and other brief, heavy rainstorms that can temporarily overtax the sewer.
- “Other” includes backups where conditions warranted further investigation.



DEP Field Operations crew cleaning a catch basin

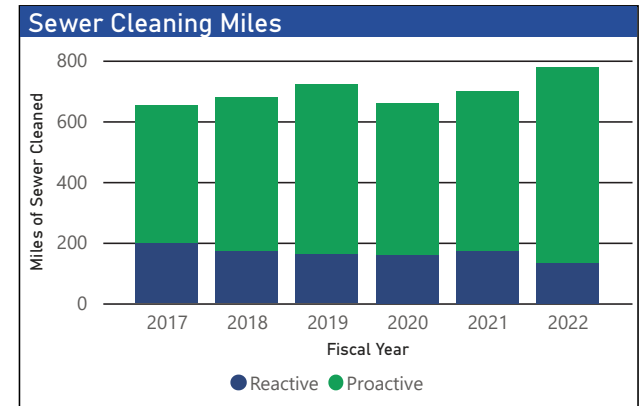
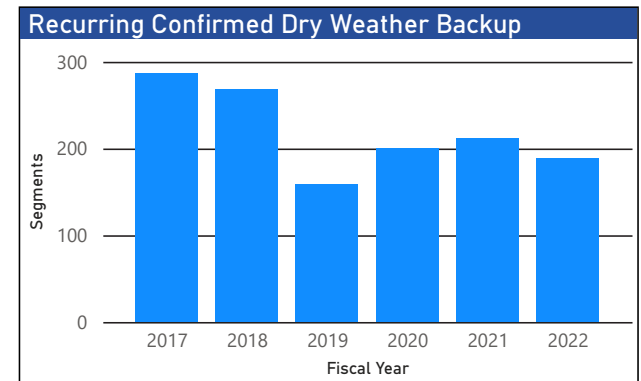
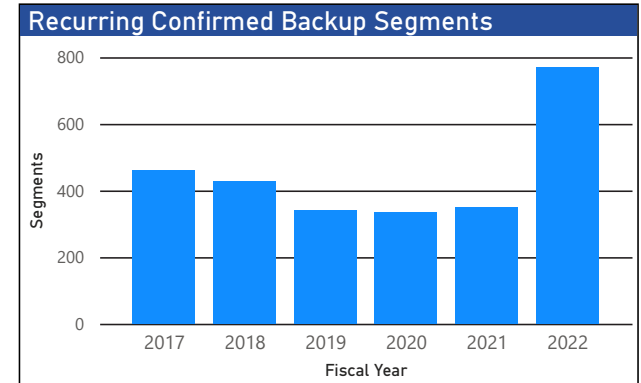
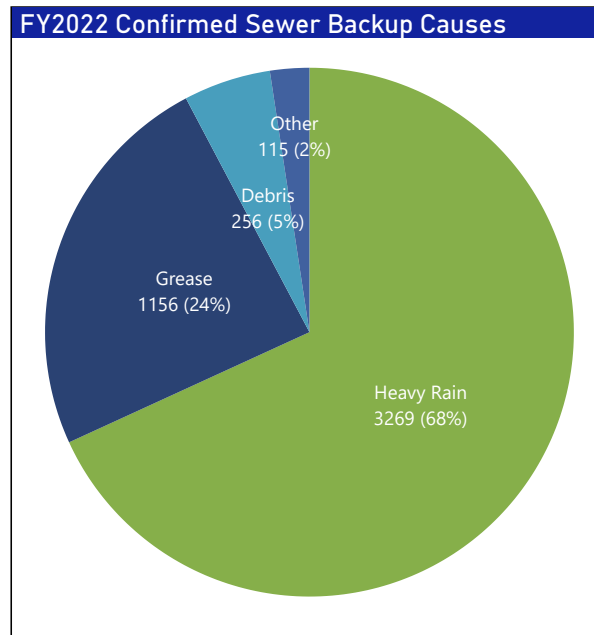
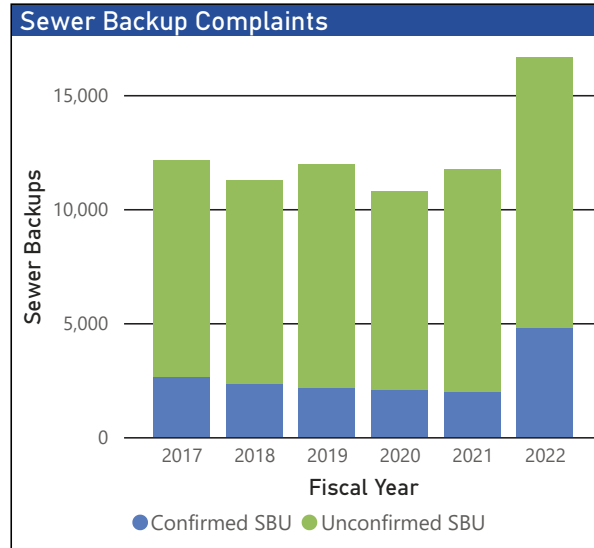
CITYWIDE

A week after Hurricane Henri broke the City's records for most rainfall in a single day and in a single hour, Hurricane Ida shattered those records, flooding streets, subways, and homes. This intense rainfall significantly contributed to increases in sewer backups and catch basin complaints as well as to increases in the response times to those complaints.

With respect to confirmed sewer backups, average annual complaints increased 19% when the five-year average of FY2017- FY2021 is compared to that of FY2018- FY2022, an increase from 2,240 complaints to 2,671. Between FY2017 and FY2021, DEP received an average of 11,576 total sewer backup complaints per year (both confirmed and unconfirmed), compared to an average of 12,481 total sewer backup complaints per year between FY2018 and FY2022, an increase of 8%.

Improvements can be seen in recurring dry weather confirmed sewer backups, which have decreased by 9% over the same timeperiods (averaging 225 annually for FY2017-FY2021, compared to 205 for FY2018-FY2022). Recurring sewer backups showed a 16% increase, increasing from a yearly average of 383 in FY2017-FY2021 to an average of 445 in FY2018-FY2022.

In FY2022, 68% of confirmed backups were attributed to heavy rains; 24% attributable to grease; 5% attributable to debris; and 2% due to other causes. Systematic sewer cleaning continued on pace, with more proactive than reactive cleaning.



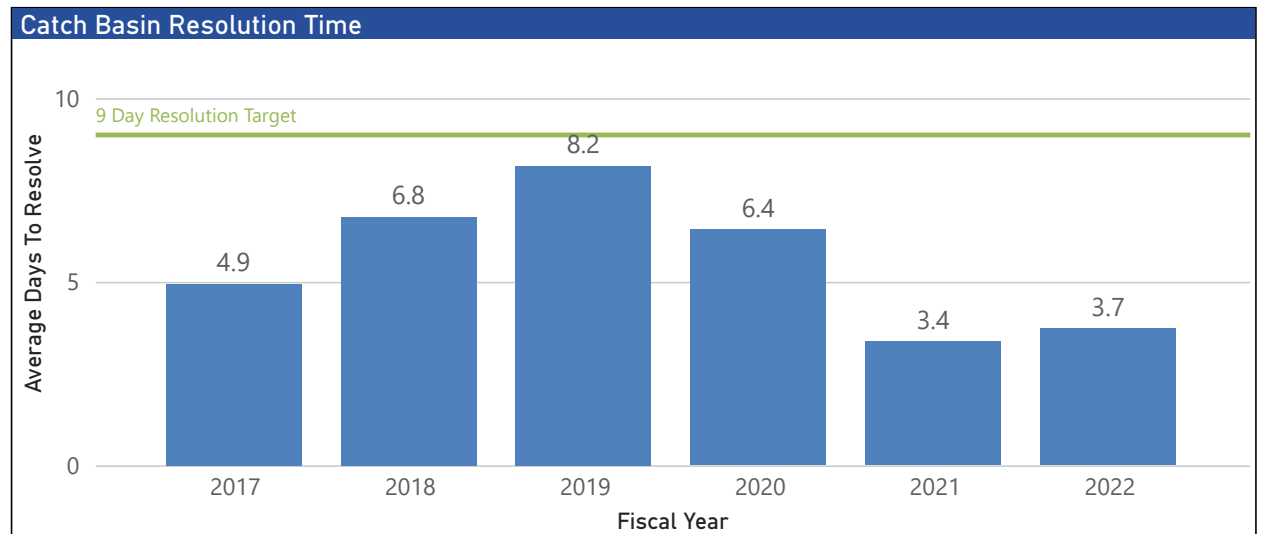
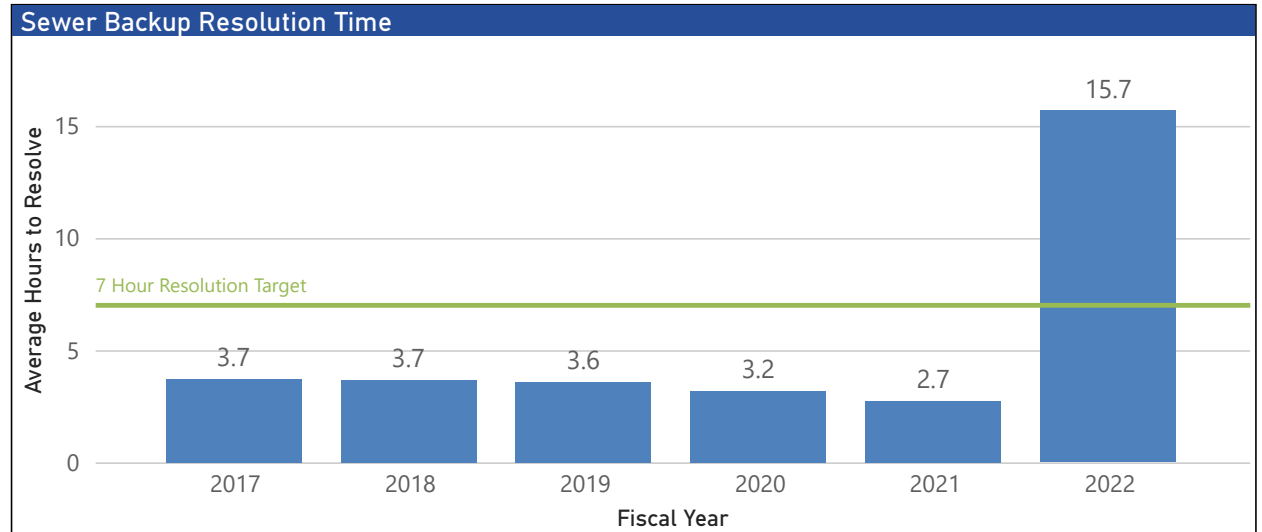
SEWER BACKUP AND CATCH BASIN RESOLUTION TIME

New York City has more than 153,000 catch basins to collect storm water runoff from streets and sidewalks. DEP's rigorous sewer and catch basin inspection, analysis, and cleaning programs have produced improvements in the level of sewer service citywide.

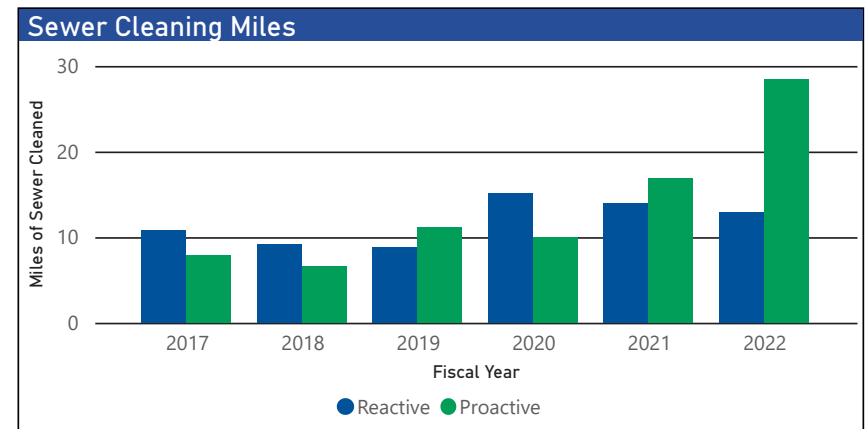
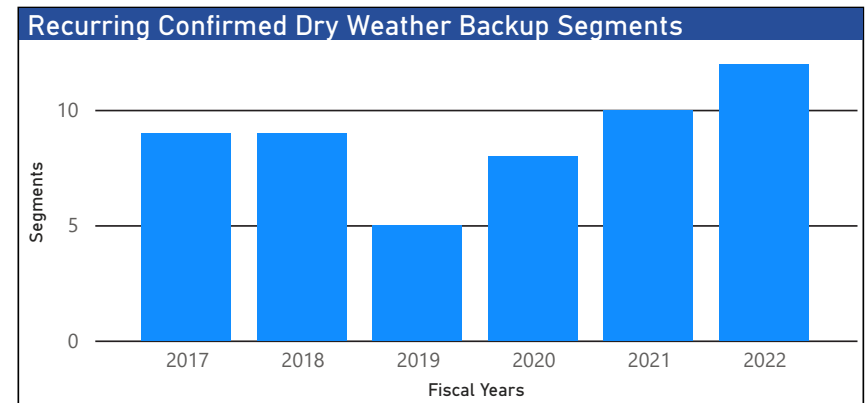
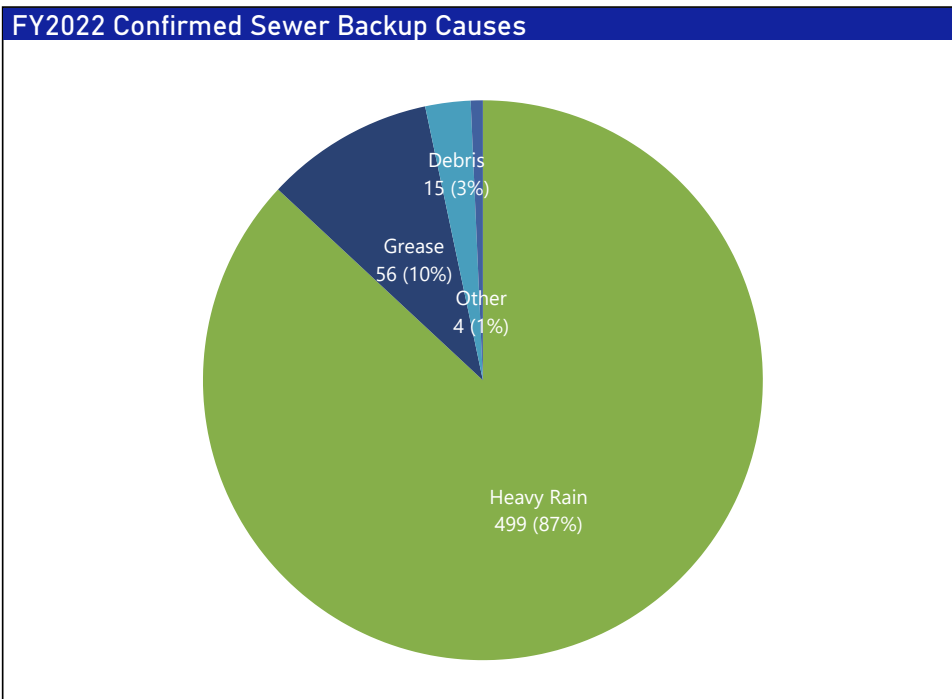
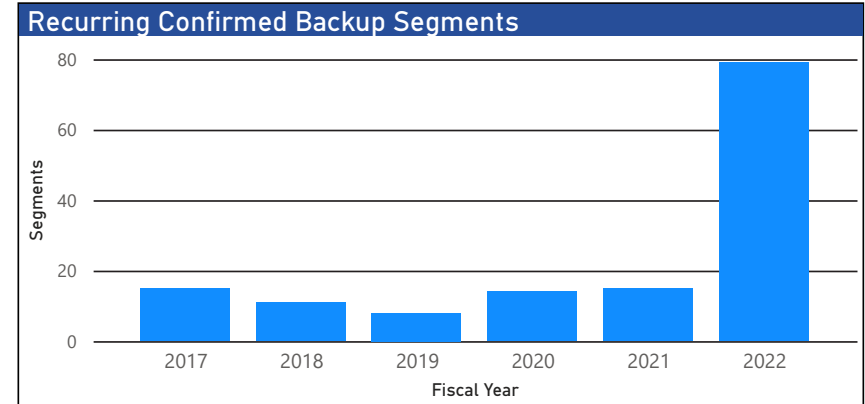
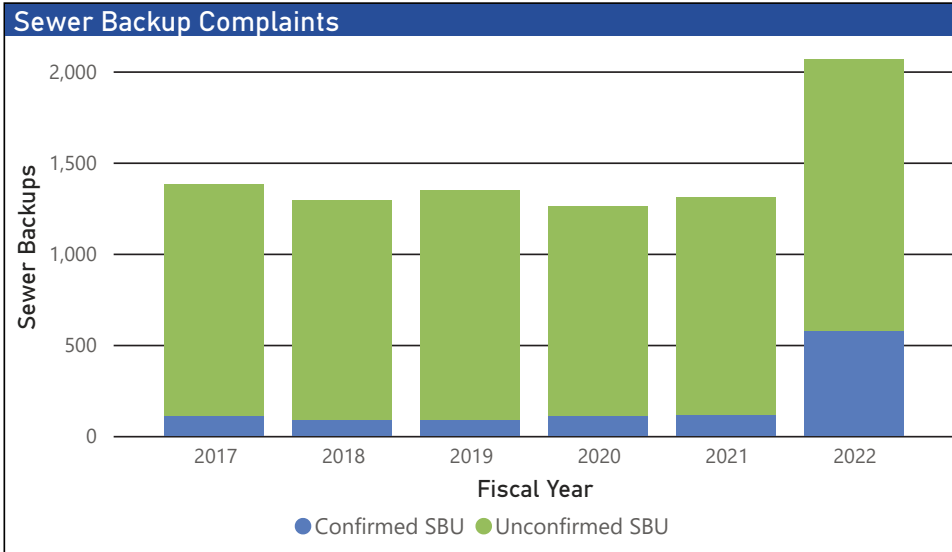
Through Fiscal Year 2021, the time to resolve sewer-related issues remained below the service level targets of 7 hours to resolve a sewer backup complaint and 9 days to resolve a catch basin complaint. In Fiscal Year 2022, the large volume of sewer backup complaints received due to Hurricane Ida increased DEP's average time to respond to sewer backups to 15.7 hours.

From FY2017 to FY2021, DEP resolved sewer backup complaints in 3.4 hours, on average. This metric averaged 5.8 hours for the period between FY2018 and FY2022, an increase of 71%.

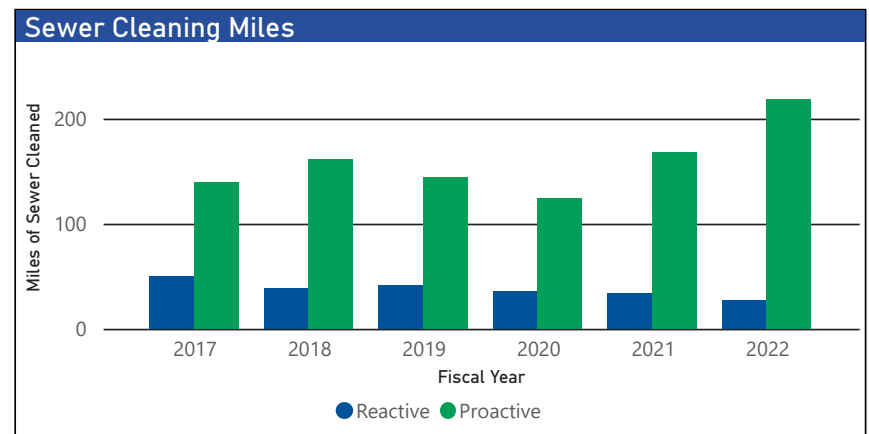
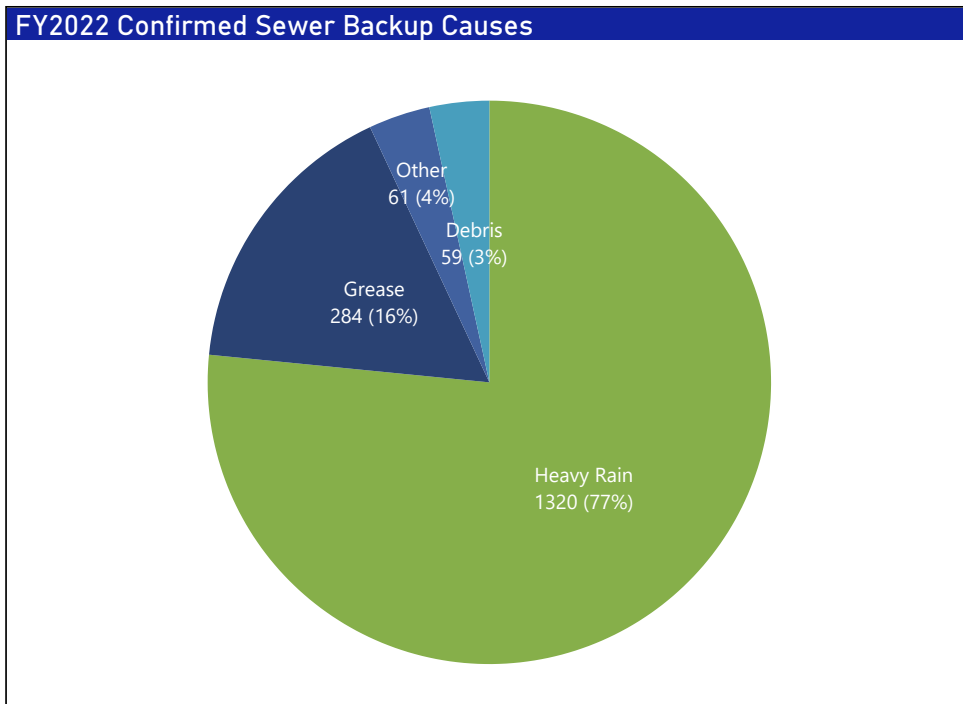
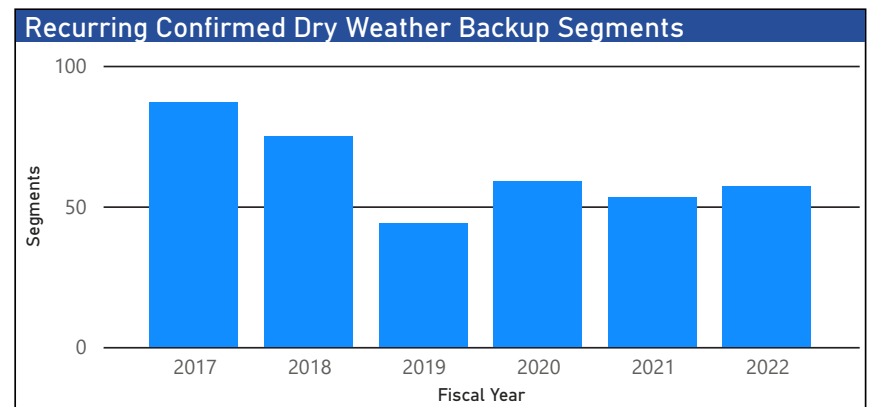
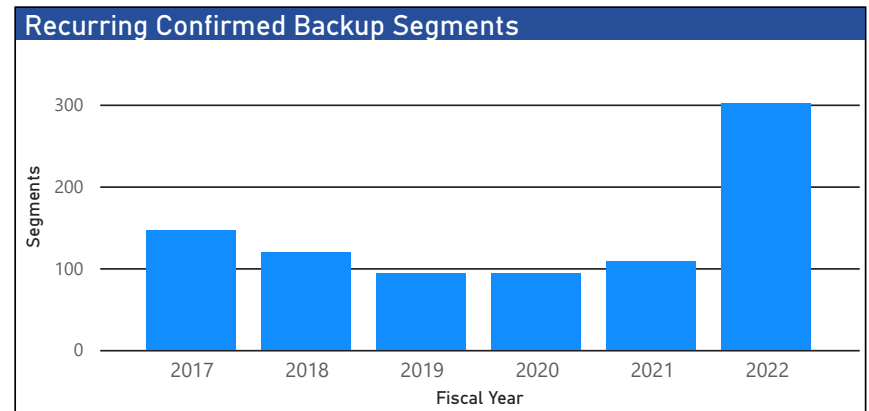
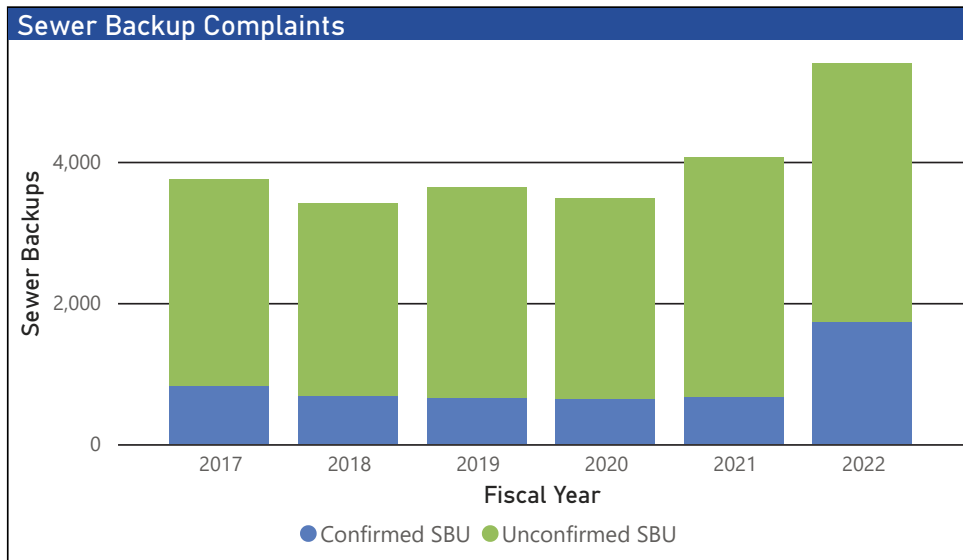
For catch basin-related complaints, the average resolution time from FY2017 to FY2021 was 5.9 days which decreased 4% to 5.7 days for FY2018 to FY2022.



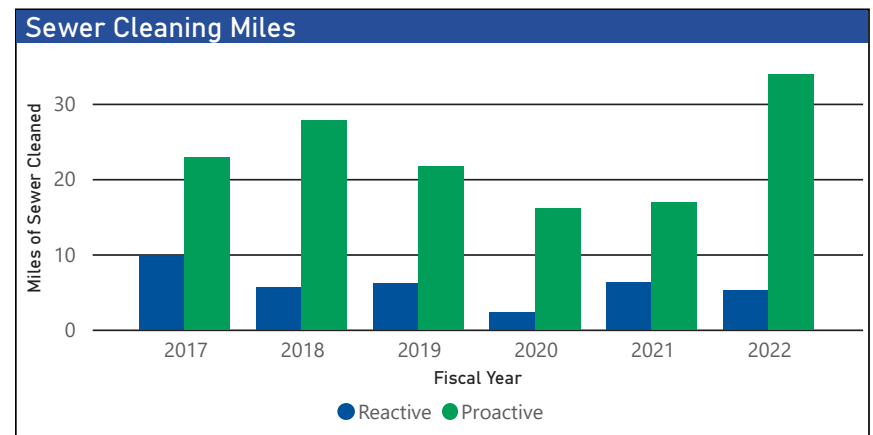
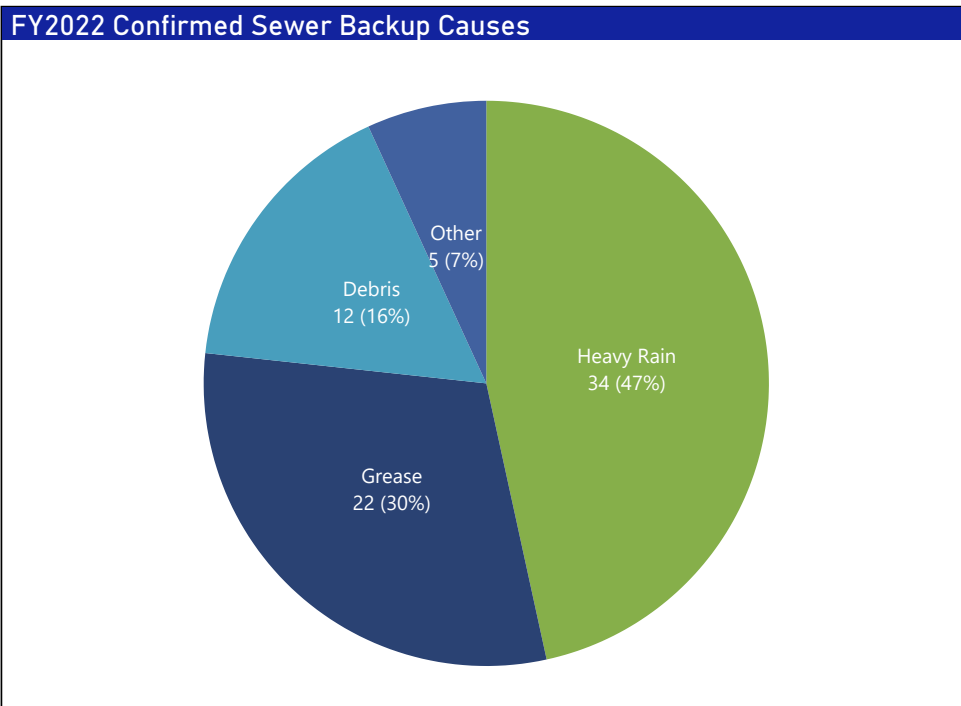
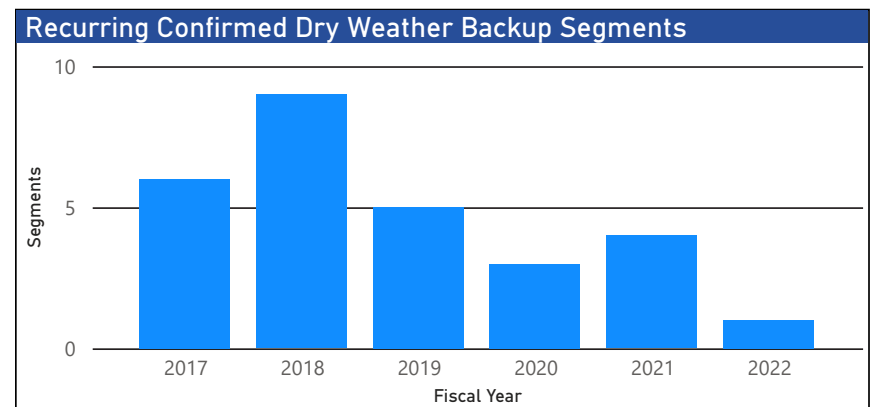
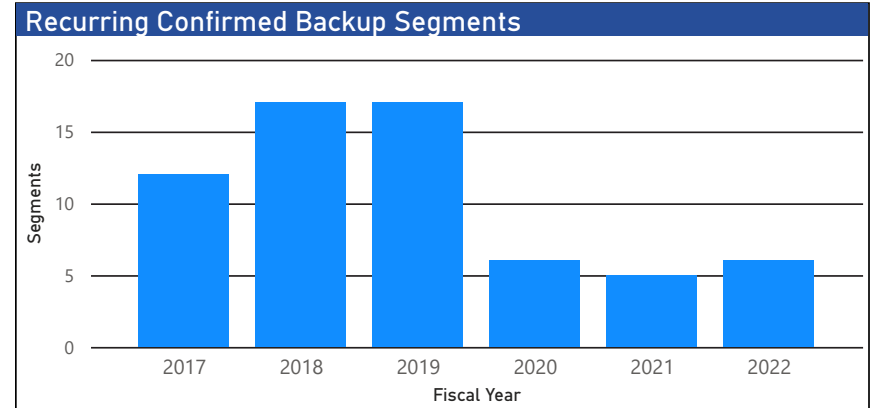
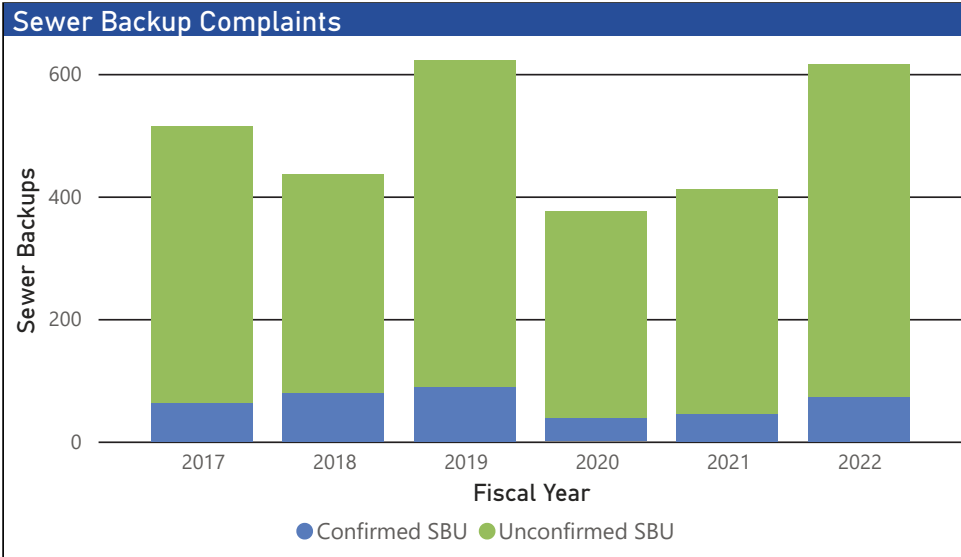
BRONX



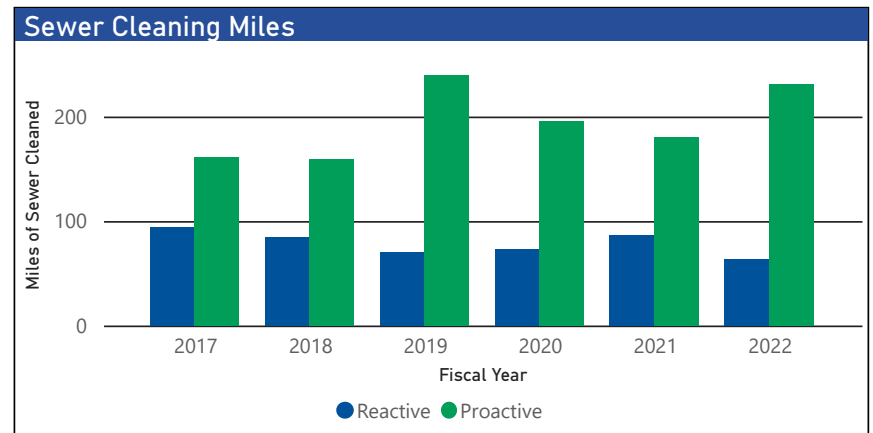
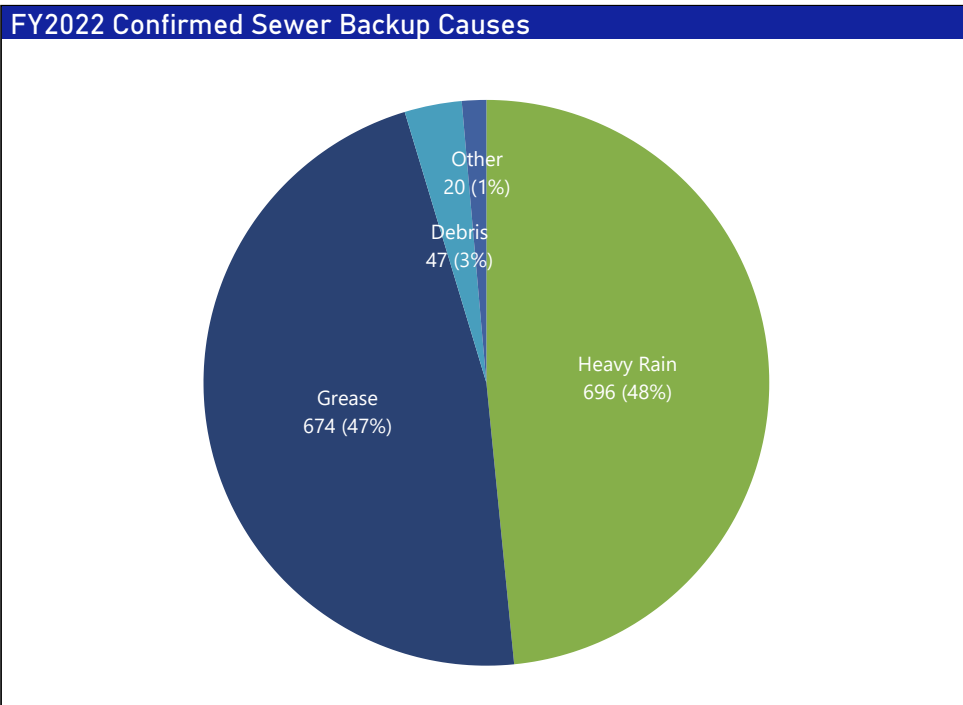
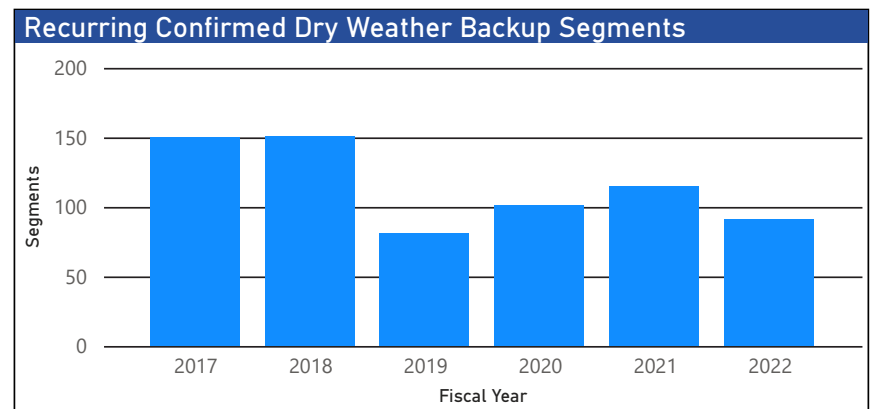
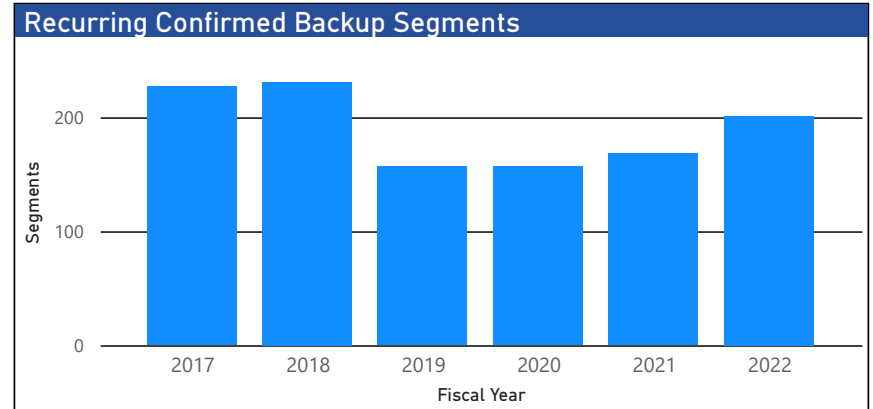
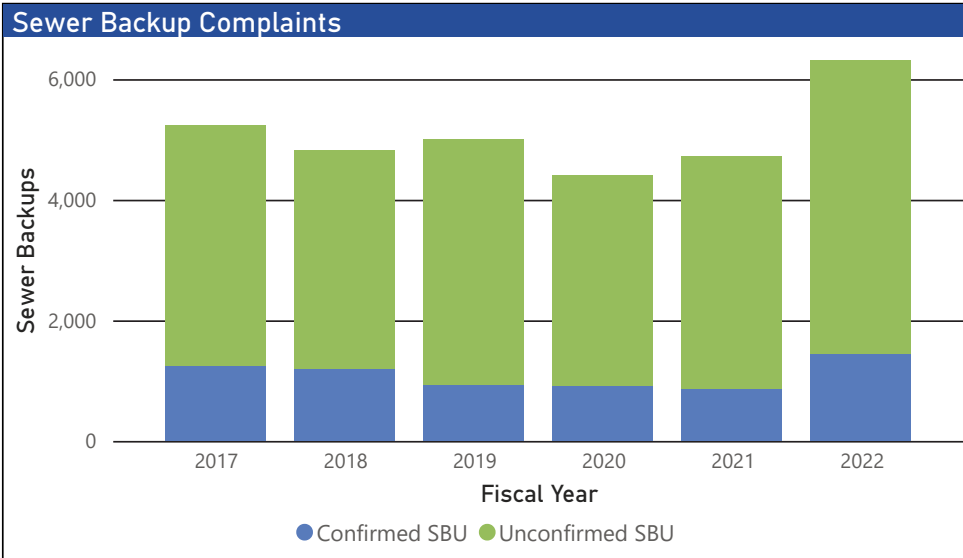
BROOKLYN



MANHATTAN

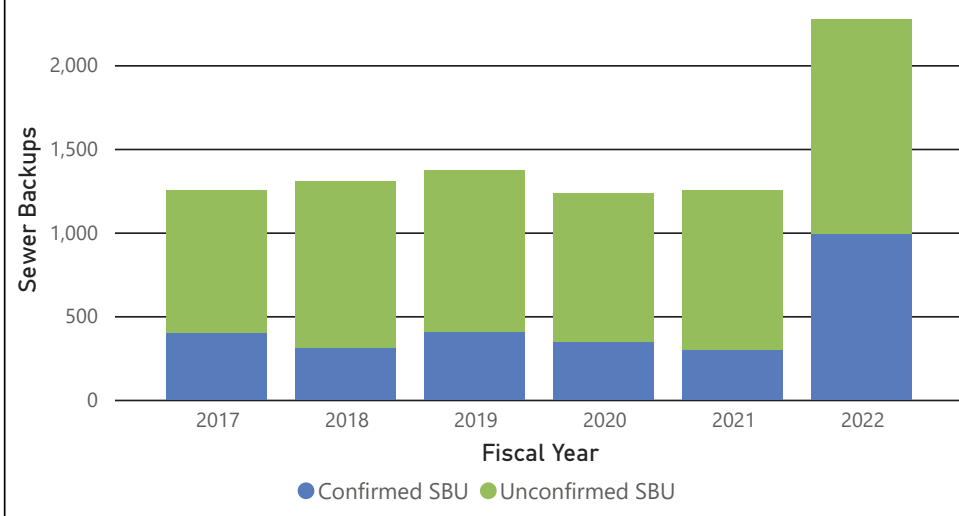


QUEENS

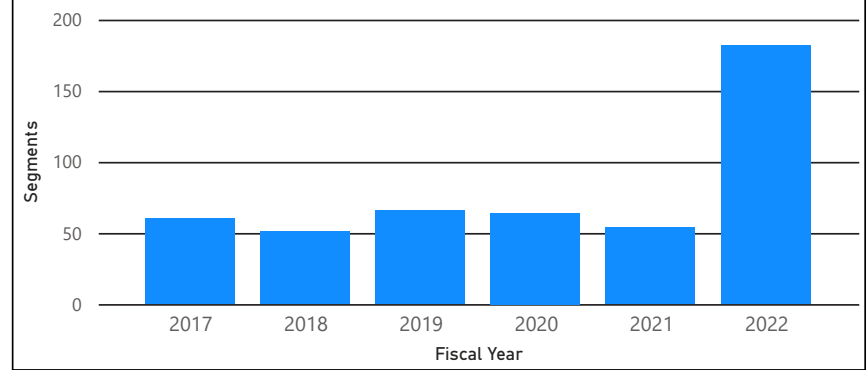


STATEN ISLAND

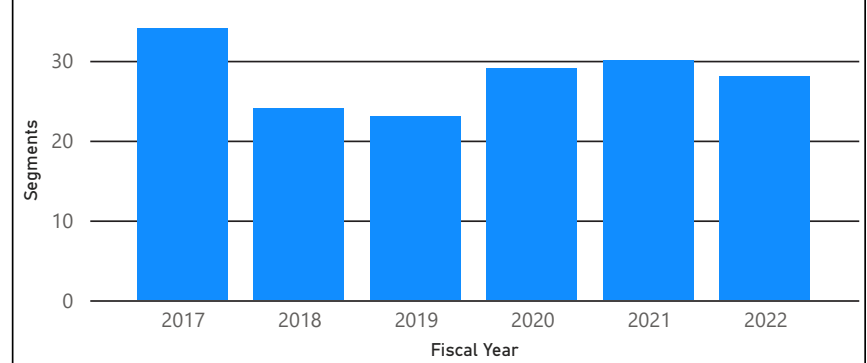
Sewer Backup Complaints



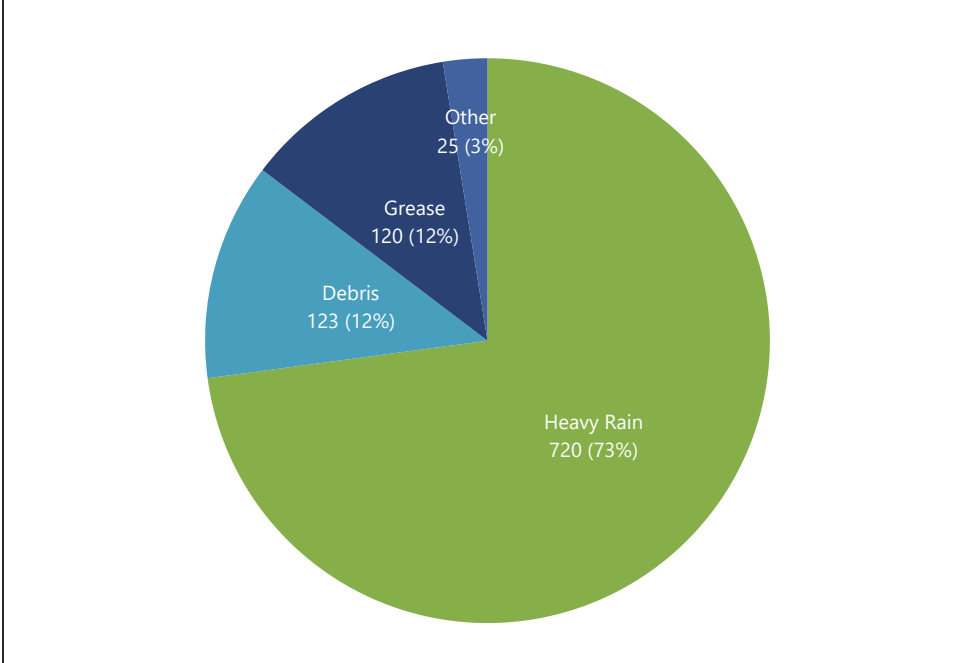
Recurring Confirmed Backup Segments



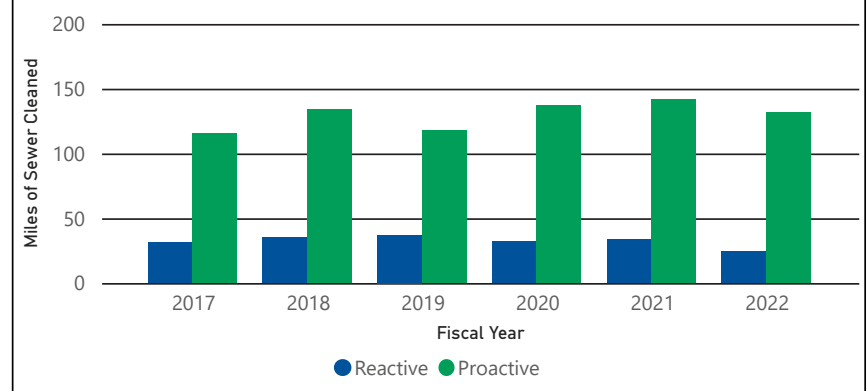
Recurring Confirmed Dry Weather Backup



FY2022 Confirmed Sewer Backup Causes



Sewer Cleaning Miles





**Environmental
Protection**

nyc.gov/dep